



ENVIRONMENTAL STEWARDSHIP DEPARTMENT/

NEW BEDFORD CONSERVATION COMMISSION

CITY OF NEW BEDFORD
SCOTT W. LANG, MAYOR

TRC Reference Number: 115058

February 17, 2010

Kimberly N. Tisa, PCB Coordinator
United States Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, Massachusetts 02109

RE: Addendum to Polychlorinated Biphenyl (PCB) Remediation Notification Letter
Related to Residential Building Demolition and Foundation Management
City of New Bedford
101, 102 and 111 Greenwood Street and 98, 108 and 118 Ruggles Street
New Bedford, Massachusetts 02740

Dear Ms. Tisa:

This letter serves as a formal addendum to the notification letter submitted to the United States Environmental Protection Agency (EPA) by the City of New Bedford (City) on September 16, 2009 regarding preparations to commence on-site activities related to building demolition at the above referenced residential properties. This addendum seeks to clarify the technical approach that will be utilized with regard to sampling of the existing concrete foundations. The sampling approach detailed herein will be implemented, pending EPA approval of the plan and review of the resulting analytical sampling data, prior to commencing demolition activities at any of the properties. This addendum in no way changes the views and opinions presented in the September 2009 notification letter.

Technical Approach

As detailed in the September 16, 2009 notification letter, the City is prepared to conduct building demolition activities at six recently acquired properties as an interim step toward the implementation of a full remedy for the subject parcels. The City has proposed to collect samples of concrete to evaluate if the portions of the foundation in contact with soil and subject to demolition and subsequent management have been impacted by contact with any potential PCB contaminated soil. Concrete and corresponding soil sampling will be conducted at each of the six dwellings; however, as you know, concentrations of PCBs in soil in excess of 50 milligrams per kilogram (mg/kg), and therefore constituting a PCB Remediation Waste, have historically only been detected at three out of the six dwellings (i.e., 118 Ruggles Street, 101 Greenwood Street and 102 Greenwood Street discussed in this letter). The analytical results of the concrete sampling will be reviewed in consultation with EPA to determine the regulatory status of the foundations at each dwelling.

The proposed sampling will be conducted by the City's environmental contractor on in-place concrete surfaces prior to initiation of building demolition activities. As discussed during the site visit

conducted with you and representatives of TRC Environmental Corporation and its drilling contractor (New England Geotech, LLC) on January 20, 2010, two different sampling approaches will be implemented depending on the depth to which the dwelling's foundation is installed in the surrounding earth, as outlined below:

- **111 Greenwood Street and 118 Ruggles Street.** The dwellings at these locations have deeper foundation systems. At these locations, samples will be collected using horizontal coring and drilling methods from the inside of the building structures, as described herein.
- **101 Greenwood Street, 102 Greenwood Street, 98 Ruggles Street and 108 Ruggles Street.** The dwellings at these locations are typical of raised ranch/spilt entry ranch construction in that their foundations are installed at shallow depths in the surrounding earth. The concrete samples will be collected from the exterior. Adjacent soil samples will be collected in a manner consistent with previously employed hand-tool methods at the site. The sampling of the concrete foundations of these dwellings will be conducted in accordance with the EPA Region I Standard Operating Procedures (SOP) for Sampling Concrete in the Field (December 1, 1997) and more specifically the SOP for Sampling Porous Surfaces for PCBs (Revision 3, July 22, 2008).

In either case, the scope of work will be sufficient to meet the data quality objectives and for determining compliance with the Toxic Substance Control Act (TSCA) PCB Regulations under 40 CFR Part 761.

Interior (Basement) Horizontal Coring Approach

The collection of samples from the two properties with deeper foundations/basements (111 Greenwood Street and 118 Ruggles Street) will proceed by horizontally coring the foundation concrete. The concrete foundations at each of the properties will be sampled at regular intervals. One sample will be collected per ten linear feet of interior basement foundation wall around the entire perimeter of each dwelling. The foundation perimeters for these properties are estimated to be approximately 120 feet on average, requiring approximately twelve concrete samples per property (excluding quality control samples). Prior to sample collection, the foundation perimeter at each dwelling will be measured in the field and the quantity of samples will be adjusted accordingly, either increased or decreased, based on that measurement and site-specific conditions. Each sample location will be pre-marked along the foundation wall to ensure a relatively even distribution of samples.

A concrete coring machine (e.g., Hilti™ drill equipped with 2 or 3 inch diamond bit) will be used to horizontally core the foundation from the interior basement wall to the exterior foundation face. The concrete core will be removed from the foundation and will immediately be inspected for the presence or absence of any surficial weatherproof coating or sealant. If present, the waterproof coating material will be sampled by a qualified person (e.g., Massachusetts certified asbestos investigator/analyst) and analyzed for asbestos (i.e., approximately one sample per foundation wall). However, this will be a separate sampling effort conducted from the exterior, or through the collection of additional cores. It is anticipated that, if present, approximately 4 to 5 samples will be

collected per property for asbestos analysis. It should be noted that foam material installed as an exterior insulation layer may also be present in association with the foundation walls. If present the foam will be sampled for laboratory PCB Aroclor analysis (SW-846 Method 8082). The outer 0.5 inches of the concrete core (i.e., exterior foundation surface in contact with soil, including any waterproof coating) will be removed for laboratory PCB Aroclor analysis (SW-846 Method 8082). The concrete sample may be pulverized on site or submitted to the laboratory for processing, at the option of the sampling team. No attempt to remove any waterproofing coating will be undertaken for samples submitted for PCB analysis. The top 0.5 inch will be submitted in total whether coated or uncoated.

Following removal of the concrete core, a hammer drill will be used to horizontally advance a 2 inch diameter large bore sampling device for the collection of discrete soil samples. The approximately 2 to 3 inches of soil material formerly in contact with the exterior foundation surface will be collected and held by a qualified laboratory for PCB Aroclor analysis (SW-846 Method 8082) contingent upon the analytical results of the adjacent concrete sample. Analysis of soil samples will be authorized if total concentrations of PCB Aroclors detected in the concrete sample exceed 1 mg/kg total PCBs. The soil material will be geologically logged by a qualified person familiar with the site. Sample locations will correspond to a soil depth of approximately 1 foot below ground surface.

Water will be required throughout the coring activities to cool the diamond bit. Any fluids generated during coring activities will be collected using a ShopVac® and containerized in 55 gallon drums. The drums will be sealed, marked and temporarily stored onsite pending characterization of the fluids for disposal purposes. All drums will be placed in basins as a secondary containment precaution.

Since the dwellings are expected to be demolished and the foundations below grade crushed to 6-inch minus for on-site reuse, the core holes will not be patched following sampling.

Permanently attached structures with footings likely to extend below ground surface (e.g., stairs, masonry porches, decks, etc.) that cannot be horizontally cored from the interior basement will be sampled consistent with the exterior sampling approach below.

Exterior Sampling Approach

The concrete foundations at each of the four subject properties with shallow foundation systems (101 Greenwood Street, 102 Greenwood Street, 98 Ruggles Street and 108 Ruggles Street) will be sampled at regular intervals. One sample will be collected per ten linear feet of exterior foundation wall around the entire perimeter of each dwelling, including permanently attached structures with footings likely to extend below ground surface (e.g., stairs, masonry porches, decks, etc.). In addition, the detached concrete shed located in the rear of the 111 Greenwood Street property will be subject to sampling. The foundation perimeters for these dwellings are estimated to be approximately 120 feet on average, requiring approximately twelve concrete samples per property (excluding quality control samples). Prior to sample collection, the foundation perimeter at each dwelling will be measured in the field and the quantity of samples will be adjusted accordingly, either increased or decreased, based on that measurement and site-specific conditions. Each sample location will be pre-marked along the foundation wall to ensure a relatively even distribution of samples. Samples of soil material

immediately adjacent to each concrete sample location will be collected concurrently. Please note that due to the presence of existing exterior structures and surfaces (e.g., decks, patios, asphalt driveways, etc.) it may not be feasible to collect concrete and corresponding soil samples in certain locations at exact ten foot intervals. In such instances the sample location will be adjusted to the nearest readily accessible foundation surface to attain an equivalent frequency.

Only those portions of the foundation that are in direct contact with subsurface soil material, and therefore potential PCB Remediation Waste, will be sampled. At each pre-marked sample location, the existing soil material will be temporarily pulled back to expose the surface of the foundation to a depth of approximately two feet below ground surface. A decontaminated shovel or equivalent will be used to pull the soil material away from the foundation wall only to the degree necessary to allow for concrete sample collection. The foundation wall will immediately be inspected for the presence or absence of any surficial weatherproof coating or sealant. If present, the waterproof coating material will be sampled by a qualified person (e.g., Massachusetts certified asbestos investigator/analyst) and analyzed for asbestos. It should be noted that foam material may also be present in association with the foundation wall. If present the foam will be sampled for laboratory PCB Aroclor analysis (SW-846 Method 8082).

Samples of the soil material pulled back from the foundation will be collected from 0 to 1 foot and 1 to 2 feet below ground surface to be held by a qualified laboratory for PCB Aroclor analysis (SW-846 Method 8082) contingent upon the analytical results of the adjacent concrete samples. Analysis of soil samples will be authorized if total concentrations of PCB Aroclors detected in the concrete sample exceed 1 mg/kg total PCBs. The soil material will be geologically logged by a qualified person familiar with the site. It should be emphasized that no demolition or soil excavation activities are proposed for implementation of this scope of work.

Following soil and as needed foam insulation board sampling, the exposed concrete foundation surface will be dry brushed to remove any remaining soil material. The concrete foundation will be sampled from 0 to 0.5-inches below the concrete surface, regardless of the presence of a weatherproofing coating, sealant or foam, using an impact hammer drill or equivalent in accordance with the EPA SOP for Sampling Porous Surface for PCBs (Revision 3, July 22, 2008). Samples will be collected from 0 to 1 foot and 1 to 2 feet below ground surface along the foundation wall. Each concrete sample will be submitted to a qualified laboratory for PCB Aroclor analysis (SW-846 Method 8082). Please note that multiple holes may be drilled in close proximity to one another to generate sufficient volume for analytical testing. Soil material moved by shovel to gain access to the exterior wall for concrete sampling will be replaced following concrete sample collection.

General Sampling Procedures

Representative quality control samples will also be collected during implementation of this scope of work. This will include field duplicate, matrix spike and matrix spike duplicate samples collected at a frequency of one per twenty samples. For core sampling, matrix spike and matrix spike duplicate samples may need to be collected from additional cores advanced at adjacent locations.

All sampling equipment will be decontaminated prior to use and between each discreet sample in accordance with the EPA SOP for Sampling Porous Surface for PCBs (Revision 3, July 22, 2008) and self-implementing decontamination procedures as set forth under 40 CFR Part 761.79(c)(2)(ii). This includes a detergent and water wash, water rinse and hexane rinse. Equipment may also be wiped with a hexane soaked cloth as needed. A flow chart outlining the decontamination procedures is attached to this addendum.

Waste generated during the sampling event, including that generated as a result of decontamination procedures, will be handled and disposed of in accordance Federal, State and Local regulations. Non-liquid waste materials (e.g., PPE, rags, gloves, brushes, etc.) will be managed in accordance with 40 CFR Part 761.61(a)(5)(v). Liquid waste, specifically water generated during coring activities and associated with decontamination procedures, will be managed per 40 CFR Part 761.79(b)(ii) and 761.79(b)(iii), with a decontamination standard for water of less than 3 ug/L PCBs for discharge to navigable waters or treatment works and less than 0.5 ug/L PCBs for unrestricted reuse. Evidence of an appropriate permit will be obtained from the City prior to discharge of any wastewater to the treatment works. For wastewater greater than 3 ug/L PCBs, an appropriately licensed waste hauler will be contracted for the disposal of the spent decontamination fluids. A flow chart outlining the waste management and pollution prevention procedures is attached to this addendum.

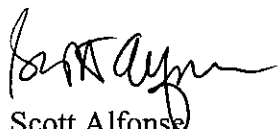
The sampling will be performed in accordance with TRC's site-specific health and safety plan (HASP) which outlines the anticipated hazards associated with above referenced properties.

Conclusion

The City anticipates that the concrete foundation, soil and as needed waterproof coating and insulating foam sampling will begin as soon as possible following your concurrence on this sampling plan and no demolition will start prior to implementation of this sampling. The City understands that based upon the results of this sampling program, EPA approval of the demolition plan may be required. The sampling plan described herein is designed to help facilitate demolition activities in support of an interim step toward a full remedy for the subject parcels. The full remedy will be the subject to subsequent regulatory submittals to the EPA and the Massachusetts Department of Environmental Protection (MassDEP).

If you have any questions concerning this letter, please do not hesitate to contact me at 508-991-6188.

Sincerely,



Scott Alfonso
Director

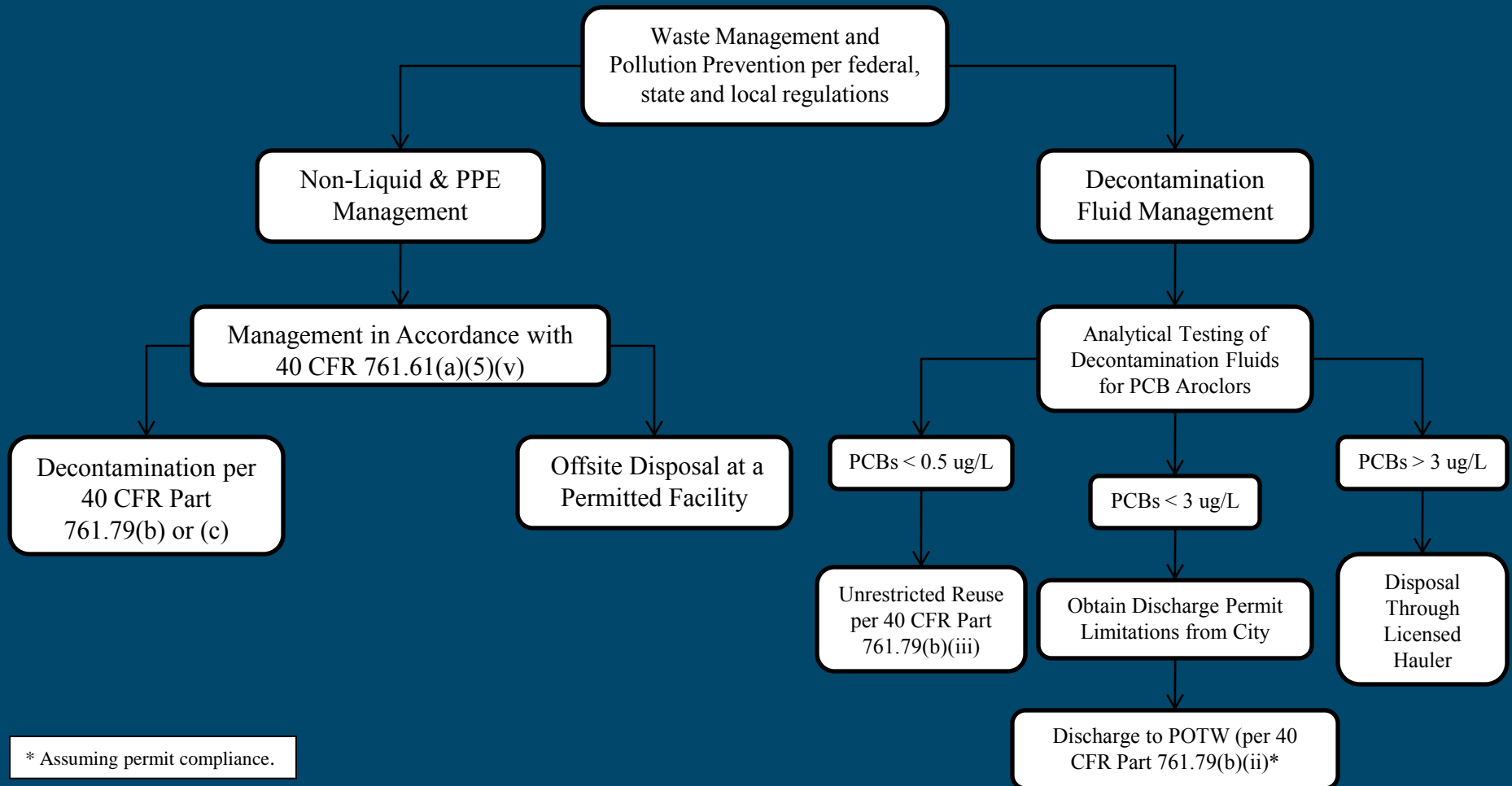
cc. Molly Cote, Massachusetts Department of Environmental Protection (by electronic PDF)
Cheryl Henlin, City of New Bedford (by electronic PDF)
David M. Sullivan, LSP, CHMM, TRC (by electronic PDF)

Attachments

- Flow Chart -- Waste Disposal Procedures
- Flow Chart -- Decontamination Procedures

Flow Chart

Waste Disposal Procedures - Residential Concrete Sampling



Flow Chart

Decontamination Procedures - Residential Concrete Sampling

